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# USSR Report

MILITARY AFFAIRS

No. 1662



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## NAVAL FORCES

### EXTENDED CRUISE TRAINING DISCUSSED

Moscow VOYENNYE ZNANIYA in Russian No 9, Sep 81 (signed to press 10 Aug 81) pp 10-11

[Article by Captain 1st Rank A. Ivanov: "On Extended Cruise"]

[Text] This is not the first wee the stem of this ASW ship has been cutting through the vast expanses of the Atlantic. A small island of iron in the boundless ocean under the flag of the Soviet Navy. When he looks at it each seaman involuntarily experiences a feeling of pride in our great motherland and a sense of personal responsibility before the people for defending their constructive labors.

Behind now are the stormy Black Sea and the wearying soupy fog in the Bosphorus. The Mediterranean permitted no relaxation, not to mention the Atlantic Ocean, which has tested the strength and endurance of the crew. It was required to perform no small number of combat training assignments.

Missilemen, gunners, torpedomen and engineering department personnel, who kept the ship running at the proper speed and supplied with electric power, underwent a period of serious test.

The first to be tested were the subordinates of Lieutenant A. Dorogiye. Working in individual antichemical protective gear, Petty Officer 2d Class M. Abdukhadyrov and Senior Seaman N. Aleksandrov, both rated specialists, shot a floating mine. They were using a little fishing net buoy they had thrown over the side.

This big ASW ship enjoys a good reputation in the Red Banner Black Sea Fleet. On the basis of its performance in last year's socialist competition, the crew was awarded the military council's Red Challenge Banner. In honor of the 26th CPSU Congress its seamen reached new heights in improving their operational performance. They accomplished course assignments and executed battle drills with "good" and "outstanding" ratings. The ship now has 56 per cent of its personnel with "outstanding" ratings in combat and political training; 62 per cent are specialists 1st and 2d class and it has 8 masters of military affairs. Many of its departments and services have won "outstanding" ratings.

Personnel of the missile and gunnery department, the best in the force (soyedineniye), have made an important contribution to the overall success. They are the fruits of the purposeful and persistent efforts of its commander, Lieutenant Commander V. Karendovich, and the party and Komsomol organizations. In the course of the extended cruise missilemen and gunners improved their practical skills substantially.



Take, for example, the men in the "outstanding"-rated antiaircraft missile battery commanded by Lieutenant Commander M. Kosov. This is not the first year this subunit (podrazdeleniye) has borne the high designation of "outstanding." It invariably executes all its combat training missions with high ratings. Petty Officer 1st Class G. Otchenko, a Belorussian, Petty Officer 2d Class I. Boroday and Seaman P. Stel'mashchuk, Ukrainians, Seaman V. Lobanauskas, a Lithuanian, and many others as well are providing examples of exemplary performance of service responsibilities.

Socialist competition over the course of the cruise was especially intense between two batteries: those of Lieutenant Commander Kosov and Lieutenant Reshetov. This rivalry brought good results. Warrant Officer A. Buzdugan, Petty Officer 1st Class G. Otchenko and Petty Officers 2d Class L. Koval' and N. Dyunin all earned the title of rated specialist. Seaman V. Lobanauskas had performed effective equipment maintenance.

The general drill signal has sounded frequently over the course of the ocean cruise. And again today the trill of the alert bell has summoned the seamen to their battle stations. The missilemen work quickly and efficiently without any hitches, like a single well-tuned machine.

Seaman Lobanauskas spotted a low-flying target at maximum range. Operators under Petty Officer 2d Class Koval' quickly began to track it without any difficulty. All necessary data are now being generated. A missile is loaded onto the launcher. The command "Fire!" rings out. And the fiery arrow slices across the horizon as it speeds toward the target. The "enemy" is destroyed. The rating--"outstanding"!

The sonarmen have been standing a vigilant watch. This small group of men under the command of Lieutenant Yu. Shanskiy has of late invariably performed successfully in socialist competition and executed combat training assignments and drills with "outstanding" ratings. All training here is organized in accordance with requirements which would be imposed by actual battle conditions. And in action against an "enemy" below the main burden in fact rests upon the sonarmen. They locate a submarine and "hold" it until it is "destroyed."

Sonarman is a very important specialty aboard an ASW ship. He has to prize each passing second in his search for enemy submarines. When he receives the first signal from a target he has to report it immediately to the main control station. Upon verifying his data, the ship's captain immediately makes the necessary decision, anticipates the action the submarine's crew will take and prevents it from taking evasive action.

Each day of the cruise saw the sonarmen in training drills at their battle stations. Each operator worked to develop the practice of reporting continuously to the captain on the slightest change in the range and bearing of the target and in the tone of the echo. Petty Officers 2d Class P. Boyko and N. Zazhigin, the ship's best sonarmen, passed on some of their experience to their junior comrades. The cruise saw widespread intensive competition under the slogan "Excellent results every day of the cruise!" As a result, young seamen G. Monopa, I. Podovu and A. Volkov were successful in developing a mastery of their specialties and learning to stand a vigilant underway watch. By the end of the cruise they improved their skills substantially.

The combat information center (CIC) is the ship's unique brain center, the point at which converge all data on the situation in the vicinity. Success in the execution of virtually any combat training assignment depends upon well coordinated action on the part of the personnel involved. It also plays a great role in difficult navigational situations when a ship is under way through narrow waters. CIC team leader Warrant Officer A. Sakhno understands all this very well. In the course of this extended cruise,

where conditions approximated as nearly as possible those of actual battle, he consistently taught his men the art of accurate determination of aerial and surface target motion and helped them become proficient in plotting course on the plotting board.

Not long ago, for example, Seaman N. Sobolev was assigned to the ship. At first he was simply unable to work several targets at a time, despite the fact that in drills back at the base he had not done too badly in discharging responsibilities he was assigned. The warrant officer had to work hard with the man, going through with him the procedures involved in working targets, first by the elements involved and then in accordance with the series of standard problems put together on the ship especially for new men. Literally every day brought the seaman some new success, small success but success nevertheless. By the time they were into their crossing of the Mediterranean Sobolev was successfully monitoring the situation in the air in the ship's area of operations and standing watch on his own. By the end of the cruise the seaman was working targets at the specialist 2d class level.

Also standing a vigilant day and night watch under way were the radiomen, who provided the commander with reliable and continuous communications. To accomplish this over the course of an extended cruise was no easy feat. Many difficulties contributed to the problem: adverse meteorological conditions, great distance from a shore control station and the poor radio wave transmission in distant regions of the Atlantic. The radiomen were nevertheless able to perform their assigned tasks effectively.

Radio team leader Petty Officer 1st Class S. Abramov is one of the best here. Not only did he perform his own watch duties in an exemplary manner, he was also adept at passing his experience on to his men. Even those who had never been out on an extended cruise before were able to perform their duties without error and maintain their equipment in full working order. Performing at their battle stations in an outstanding manner under the supervision of their leader were Seamen V. Alekseyev, N. Biryukov and others.

On one occasion Petty Officer 1st Class Abramov's men were preparing a transmitter for operation. It seemed they had done everything properly, but they weren't getting any output signal. So they reported the problem to their team leader. He's an experienced specialist with a 1st-class rating. But the malfunction proved an elusive and insidious one, and Abramov was unable immediately to discover the cause of the problem. He sat at the set for a good long time, but he was ultimately able to get to the root of the matter.

To stand a watch in the transmitter center where all the transmission equipment is located is a hot, stuffy affair. Neither is it any easy matter for the men who have to set with their headphones on trying to pull from the air those barely audible dots and dashes and fill in their form with the text of the radio message they have received. Over the course of the many weeks of the cruise these communications specialists have been able to insure reliable and continuous communications under even the most difficult conditions. Petty Officers 2d Class S. Aralov and K. Fabin'yan, Senior Seaman I. Doage and many others were among those distinguishing themselves.

The extended cruise is a true school teaching the mastery of military skills, courage and personal development conditioning. Out in the ocean, far from their native shores, our seamen are maintaining their loyalty to the traditions of preceding generations. In getting to know the officers, petty officers and seamen aboard this ship and in observing their performance at sea, I involuntarily found myself thinking how very much today's young navy personnel are like the heroes of the Great Patriotic War. At the 26th Party Congress Comrade L. I. Brezhnev said the following about these people:

"They have not undergone the period of harsh and bitter testing that fell to the lot of their fathers and grandfathers. But they are true to the heroic traditions of our army and our people." True by virtue of their devotion to the cause of communism, their self-control, vigilance, discipline, mastery and will to victory.

And indeed, no matter which man we might pick, either his father or his grandfather will have participated in the effort which destroyed the fascist aggressors and stood in defense of the honor and freedom of his socialist motherland. Lieutenant Commander V. Karendovich's grandfather, for example, fell heroically at the front in 1944. The grandfather of Senior Lieutenant V. Zhivokin, an antiaircraft missile battery commander, was an old Bolshevik who fought in both the Civil War and the Great Patriotic War. Vladimir's father, Yuriy Mikhaylovich Zhivokin, put in a no less illustrious military career. The outbreak of war found him a student at the Sevastopol' antiaircraft school. He volunteered for duty at the front. After the war he became an officer and a few years ago was transferred to the reserves. Lieutenant A. Reshetov's father is a Hero of the Soviet Union. Senior Lieutenant Sergey Reshetov, the commander of a rifle company, was awarded this high title in 1944 for his part in the assault crossing of the Danube.

The glorious traditions of these front-line soldiers have found their continuation in the deeds and accomplishments of their sons and grandsons and are the subject of extensive shipboard propaganda. A special display stand has been set up here untitled "We Will Add to the Glory of Our Fathers through Our Own Excellence in Service." Arranged on it are photographs of the front-line-soldier fathers of some of the ship's seamen and petty officers with brief accounts of their military careers and decorations. Here also you'll see pictures of the sons who are now worthily carrying on the torch for the new generation.

In one place, instead of a picture of a father, we see a clipping from a local newspaper with a photograph of Nikolay Petrovich Protopopov surrounded by relatives. We learn from the caption that the seaman's father served in the antiaircraft artillery, protected Baku against fascist air raids and then participated in the destruction of militarist Japan. He was awarded six state decorations. And this front-line veteran is still in service. He works in a plant as a milling machine operator and is a member of the instruction and training council. Working alongside him are his son Vladimir and his daughter-in-law. The youngest son is Seaman Aleksandr Protopopov, whose picture is also on the stand; he, too, is discharging his sacred obligation as a Soviet citizen aboard a ship. Within only a brief period of service he has become a rated specialist and proved himself a skillful and effective soldier.

In the course of political instruction at sea as part of the program of training in Marxism-Leninism these seamen, petty officers, warrant officers and commissioned officers studied material from the 26th Party Congress, to include the section on the party's international policy. It is pointed out here that imperialist circles have now launched upon a course toward undermining detente and are intensifying the arms race. They are pursuing a more aggressive policy. This was all particularly clearly evident on this extended ocean cruise. Almost every day American Orions would fly at impermissibly low altitudes over the BPK [large ASW ship]. NATO ships would maneuver dangerously close.

These difficult conditions heighten the navy man's sense of responsibility for the security of the socialist motherland. Each man looks upon his own military duties in terms of their importance to the state. All these things find reflection in the final results of combat training and impart a special intensity to competition for excellence in each day's performance over the course of an extended cruise.



...The signal sounds for a general quarters drill. A few seconds go by and battle readiness reports begin coming into the ship's primary control station. The sons and grandsons of our Great Patriotic War heroes are standing another vigilant watch at sea. They are prepared at any moment to deal an aggressor a crushing repulsing blow.

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## CIVIL DEFENSE

### ROLE OF SOCIALIST COMPETITION IN CD TRAINING

Moscow VOYENNNYYE ZNANIYA in Russian No 9, Sep 81 (signed to press 10 Aug 81) pp 12-13

[Article by Major General S. Kuzovatkin, Moscow city CD chief of staff: "A Moving Force"]

[Text] In implementing the decisions of the 26th CPSU Congress, the working people of the capital are engaged in a consistent effort to fulfill and overfulfill the quotas contained in the Eleventh Five-Year Plan, to make better use of untapped potential and to increase the efficiency and improve the quality of their work. They've gotten the new five-year plan period off to a successful start. At the same time an extensive organizational effort has been launched to train and prepare the population and economic facilities to protect against weapons of mass destruction.

Socialist competition serves as a powerful stimulus in mobilizing the masses for accomplishment of these tasks. In a joint decree the party's Moscow city committee and the Moscow soviet ispolkom have approved the "Statute governing conditions for socialist competition and the MGK KPSS [CPSU Moscow city committee] and Moscow soviet ispolkom Red Challenge Banner for the best organization of civil defense activities within the rayons of Moscow city."

The conditions of competition are defined more clearly each year by decisions of party and soviet organs. Performance results are computed on the basis of primary training-year indicators. Suggestions put forward by the city's CD staff are discussed and approved at a meeting of the MGK KPSS and the Moscow soviet ispolkom and then announced at training-methods meetings held for the city's senior civil defense personnel. First place in pregress competition, for example, went to Pervomayskiy Rayon (L. Matveyev, RK KPSS [CPSU rayon committee] first secretary; V. Pomazkov, rayon soviet ispolkom chairman and CD chief). Plans for constructing and bringing new shelter facilities into service are fully implemented here year after year. The exercises conducted in many facilities over the past year have received high evaluations. They have been a good school for instructing formations, workers, employees and the nonworking population in methods of protecting against weapons of mass destruction. The rayon civil defense staff (Colonel A. Voronkov, chief) is itself distinguished for its high state of training and good cooperation.

Second place was awarded to Frunzenskiy Rayon (B. Gryaznov, RK KPSS first secretary; A. Tsybul'skiy, rayon soviet ispolkom chairman and CD chief). Like others, this rayon, too, has drawn up a set of regulations governing competition for the best organized civil defense program among its various production facilities. They have been approved by the party raykom and rayon soviet executive committee. Competition is organized on a differentiated basis for groups of industrial facilities, nonindustrial organizations and facilities, educational institutions and rayon civil-defense services. Competition

performance results were computed by the staff (Lieutenant Colonel V. Kas'yanov, chief), discussed by the CPSU rayon committee and announced by decision of the rayon executive committee.

Production facilities winning the competition in their groups are awarded Red Challenge Banners; the best specialists and civil defense activists are presented certificates of merit and money prizes and recognized with other incentives.

Achieving the best civil defense performance results over the past two years in the non-industrial organizations and facilities group has been the USSR Ministry of Communications Central Telegraph (V. Kurguzov, CD chief; L. Koreshkina, party committee secretary and F. Akkhuzin, CD chief of staff). Personnel of this organization have rightly retained the Red Challenge Banner of the Frunzenskiy RK KPSS and rayon executive committee.

It is generally recognized that the production facility serves as the civil defense training center for the nonmilitary formations and workers and employees. We are therefore devoting a great deal of attention to the organization of CD competition in enterprises, facilities and institutions.

The famous trademark of the GPZ-1 production association is well known both in the capital and far beyond its limits. Personnel of the Order of Lenin, Order of the October Revolution First State Bearing Plant were among the first in the city to report early fulfillment of their plan for the Tenth-Five-Year-Plan period.

In addition to successful accomplishment of production tasks, the plant's administration (A. Gromov, general director; P. Kosenko, deputy general director for civil defense), party committee (D. Yulin, secretary) and staff (V. Gubarevich, chief) devote a great deal of attention to consistent compliance with party and government requirements for the strengthening of our civil defense. Plant personnel are the Moscow and Zhdanovskiy Rayon leaders in this effort, for which for the last two years in a row they have been presented the Red Challenge Banner of the CPSU's rayon committee and the executive committee of the rayon soviet of people's deputies.

It is important to point that the competition here is oriented toward quality performance of civil defense tasks on the part of shop and department personnel. They register the obligations they have undertaken with the plant trade union committee. The organizations (podrazdeleniye) which have implemented the program of basic measures to improve civil defense and well and effectively organizing the instruction of nonmilitary formation personnel and workers and employees are considered the winners of the competition. Particular attention is given in this connection to the knowledge commanders and rank-and-file have of their responsibilities, the skill with which they perform in meeting established CD standards, exemplary maintenance of protective structures and the maintenance of communications and warning equipment, reconnaissance gear, gas masks and other individual protective gear in a condition of full readiness.

Plaques of honor, souvenir pennants, certificates of merit and money prizes paid out of the material incentives fund have been instituted as incentives and encouragement for competition winners. The best activists are awarded the "Excellence in the Civil Defense of the USSR" badge.

A plant commission comprised of the deputy general director for civil defense, the deputy secretary of the party committee, the chairman of the plant committee, the secretary of the Komсомol committee, the CD chief of staff and representatives of the services has been formed to register the results of competition, check the fulfillment

of obligations and make preliminary determinations of competition winners. Competition results are announced by order of the plant civil defense chief, published in the mass-circulation paper "For an Excellent Bearing" and announced in local radio broadcasts.

In addition to collective duties, a great deal of attention is devoted here to civil defense obligations for which workers and employees bear individual responsibility. This comes as no coincidence. As Leonid Il'ich Brezhnev pointed out at the 26th CPSU Congress, socialist competition is by its very nature in fact "based upon a high degree of popular consciousness and initiative." So overall success here depends upon the personal contribution of each individual.

Here is what M. Kosmachev, a communist and foreman of the finish-turning section, wrote into his obligations: organize effective worker civil defense training, conduct instruction for them on a high methodological level, achieve no lower than an "excellent" rating for my own performance in established CD rating categories and insure that all section personnel attain at least a "good" rating for their performance and participate actively in civil defense propaganda activities. And his deed is as good as his word.

As a rule, the plant launches an extensive program of competition during a period of training and preparation for civil defense exercises as well as in the course of the exercises themselves. In 1980, for example, the automatic roller bearing facility (B. Kuzyakin, superintendent; N. Bukin, party bureau secretary; P. Bastrykin, CD chief of staff) held two special tactical exercises with rescue team personnel. On the eve of the exercises, all shops and sections held general meetings to discuss the tasks for which workers and employees would be responsible during the exercises; personnel attending the meeting undertook socialist obligations. These questions were discussed in operations meetings with the facility superintendent as well as in the course of a party meeting. Personnel of the nonmilitary formations involved underwent effective political indoctrination. Information bulletins were also put out.

A special area was created near the blast shelter for purposes of formation training and which simulated obstructions, fire situations and contaminated areas. Turning in good performances under these difficult conditions were personnel of rescue team No. 2 (V. Kamakhin, team leader; V. Barkin, deputy team leader for political affairs) and the rescue group led by senior foreman N. Tkachuk. The fire-fighting team headed by foreman Ye. Takal'nikov performed their tasks efficiently and demonstrated knowledge of their operational responsibilities. They all fulfilled their obligations with honor.

Other production facilities undertake vigorous efforts to fulfill individual and collective civil defense obligations as well. Outstanding in this connection is Moscow's automobile plant imeni Lenina Komsomol (V. Mel'nikov, general association director; V. Babkin, party committee secretary; M. Savin, deputy general director for civil defense; P. Kratko, chief of staff), which every year has won first place in competition for best organized civil defense program among production facilities in Lyublinskiy Rayon. For example, it has become an annual tradition with one of the plant's best formations, a combined detachment led by G. Nikiforov, P. Kozlov, deputy detachment leader for political affairs, to hold general meetings for personnel to discuss questions concerning the fulfillment of socialist obligations. In the course of these meetings they go over the results of their civil defense activities, take note of the best specialists, discuss thoroughly any deficiencies brought to light in the training of workers or employees and outline new socialist obligations. Detachment personnel hold a special meeting in advance of a combined special tactical-facility exercise to discuss their tasks and responsibilities, verify personnel assignments and undertake obligations for successful



accomplishment of exercise tasks. All this permits more purposeful work in mobilizing personnel for vigorous efforts in the course of an exercise and for good performance in the fulfillment of obligations on the part of all senior detachment personnel.

Also worth looking at is the experience in organizing competition acquired by the Khromatron plant (Yu. Mashin, director; R. Skalkin, party committee secretary; I. Ignatenko, CD chief of staff), one of the enterprises of the MELZ production association. Written into the plant's collective agreement is the following obligation requirement: discharge all civil defense responsibilities in an exemplary manner. Personnel in every shop and department, all plant personnel, undertake obligations in connection with this effort. These obligations then become part of the obligations assumed by plant personnel overall and are reflected on the competition board. Civil defense obligations are also posted in the CD corners. Results of performances in fulfillment of obligations during the preceding period are put up here as well. Nearby are photographs of personnel turning in the best civil defense performances. Information concerning the course of competition and the performance of the leaders is well organized and made available in a timely manner.

Socialist competition in aspects of civil defense work closely combined with production tasks is both useful and necessary. We are repeatedly convinced of this by the experience accumulated by the leading performers in civil defense among the various rayons of the city as well as among Moscow's leading enterprises, facilities and institutions.

It must be pointed out, however, that competition is still not a universally well organized activity in all production facilities. Perfunctoriness, unfortunately, is still widespread. Socialist competition in places amounts to only an effort to maintain appearances. Obligations are not always specific and realistic. Propaganda for innovations on the part of the best performers, the leading civil defense enthusiasts is occasionally weak and lagging behind events. Some senior personnel fail to insure the fulfillment of obligations undertaken by workers and employees, to follow up, to compute performance results and to do this publicly and on a mass scale. Competition here is therefore not very effective.

In delivering the city committee's report to the 24th Conference of the Moscow city party organization, comrade V. V. Grishin, member of the Politburo of the CPSU Central Committee and first secretary of the CPSU Moscow city committee declared: "We must further energize our DOSAAF and civil defense organizations...and develop in Muscovites a readiness to come to the defense of the motherland...."

Under the direction of the city party organization and inspired by the decisions of the 26th CPSU Congress, personnel of our staffs, courses, services and nonmilitary CD formations are striving persistently for further improvement in our civil defense. Socialist competition between rayons and personnel of our various production facilities--the moving force and creativity of the masses--is helping us to achieve this goal.

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## CIVIL DEFENSE

### IX ALL-UNION CONGRESS OF RED CROSS AND RED CRESCENT

Moscow VOYENNNYYE ZNANIYA in Russian No 9, Sep 81 (signed to press 10 Aug 81) pp 20-21

[Article by G. Prikazchikova: "Greater Attention to Practice"]

[Text] The 9th All-Union Congress of the USSR Order of Lenin Union of Red Cross and Red Crescent Societies met in Moscow in June. It summarized the results of its efforts over the past five years and formulated the tasks to be found facing its committees and organizations over the period 1981-1985 and on ahead to 1990 in light of the decisions of the 26th Congress of the CPSU.

The report presented by V. A. Baltiyskiy, chairman of the executive committee of the Union of Red Cross and Red Crescent Societies, and presentations by delegates cited figures testifying to the great contribution the societies' committees and organizations have made to the accomplishment of medical and social tasks. It is enough to point out that 11 million public health activists are participating each year in programs designed to prevent infectious diseases, in vaccinating the population and providing it with dispensary services and in conducting public health inspections of our production facilities. Assisted by Red Cross activists, some 3500 public health nurses provide medical and social assistance to tens of thousands of elderly sick without family and the war and occupationally disabled.

Defense-medical work is another and important sphere of activity in which the USSR Union of Red Cross and Red Crescent Societies is engaged. Medical aid team members and aid center personnel participate actively in programs of preventive care and render medical first aid directly at the workplace. The contribution they have made to increased labor productivity in their enterprises is to be found expressed in specific and fairly impressive statistics. Officials at the Fergana chemical plant (Uzbek SSR), for example, figure that thanks to timely medical first aid, which medical aid team and medical center personnel have played an active role, they have been able to reduce labor losses substantially.

These formations play an even greater role in efforts to deal with the aftermath of a natural disaster, accidents and other emergencies, with the outbreak of infectious diseases and in other emergency situations. They have given good accounts of themselves during floods in Belorussia and the Ukraine, forest fires in different parts of the RSFSR, mudflows in Kazakhstan and in the aftermath of earthquakes in Uzbekistan, Kirghiziya and Tajikistan. The courage and self-sacrifice of medical team personnel have won the high praise and regard of local party and soviet authorities.

It was observed at the congress that the quality of the training provided medical team and center personnel has improved noticeable over the past five years. Their training

now sees greater attention given to practical activities, the acquiring of experience and the development of skills. Competitions, in which more than 90 per cent of our medical aid teams and over 85 per cent of our medical stations now engage, are an effective form of training and moral-psychological conditioning.

It was emphasized at the same time, however, that far from all competitions are being conducted in compliance with established requirements. They frequently fail to achieve their objectives because they are conducted under simplistic conditions; rules are greatly relaxed; the current regulation is being violated and there have been substantial errors in evaluations and judgements. Opportunities offered by facility competitions, which are to involve all medical aid team and medical station personnel, have been inadequately exploited.

The congress directed the committees and organizations of the USSR Union of Red Cross and Red Crescent Societies to work together with our public health and civil defense agencies to achieve further improvement in the quality and effectiveness of competition and to conduct it under realistically complex conditions with the use of simulation equipment as well.

Posed at the same time was the task of raising the overall level of the training given medical aid team and medical station personnel. Sponsored assistance in the form, for example, of the sponsorship of rural medical aid teams by city teams was approved and recommended for adoption on a widespread scale.

Z. Kuz'menkova, chairperson of the primary Red Cross Society organization at the Minsk Tractor Plant, was one of the delegates to the congress. This enterprise came out as one of the initiators of sponsored assistance to rural medical aid teams. Within a short period of time it tried a variety of forms of practical collaboration: joint seminars for medical aid team leaders and political instructors, competitions, instruction and other training activities, providing rural formations assistance in the form of medicines, dressings etc.

Now that the plant's relationships as sponsor have become more clearly defined and things, we might say, have settled into some kind of routine, it is impossible not to think back to its first, not always successful, efforts. This might possibly help some avoid mistakes and for others serve as suggestions and good advice.

Even the Minsk Tractor Plant's experienced medical aid women were unable immediately to find the proper way to approach their rural counterparts. The first efforts they undertook together were a considerable disappointment: no matter how hard they tried, no matter all their detailed explanations, they got no response; it was as if they were speaking a different language. Only at this point did they come to realize that this was where they were making their mistake. They were discussing things at the level to which they themselves had become accustomed, from the point of view of the level they had attained in their enterprise. Their rural counterparts had to work under entirely different conditions; the problems they had to deal with were different; they had accumulated different funds of knowledge and, consequently, they had a correspondingly different attitude toward the effort. So there could naturally be no free and straightforward discussions.

The city girls accordingly had to change their tactics. The tractor plant medical aid team undertook to study the situation existing on the farms they were sponsoring and then in their joint seminars they were able to carry on a more relevant and objective



discussion of what a medical station or an element (zveno) of a medical aid team can do on a farm or at a field camp and of what they need to work on. The logical extension of these activities was discussion of problems associated with the training of formations for operations in emergency situations and in centers of mass destruction. They thus had occasion once again to see the effectiveness of the instructional principle of "from the simple to the complex, from the known to the unknown."

Participation by medical aid team and medical station personnel in the practical activities of public health institutions constitutes one of the conditions helping to reinforce skills and develop the moral and volitional qualities required for functioning under adverse conditions. The congress recommended that these forms of training be employed more vigorously through the exploitation of all available opportunities.

At Riga's Electric Lamp Plant imeni 50th Anniversary of October experienced medical aid team members have become reliable assistants of health center personnel. They are people devoted to duty--that's what A. Karelina, health center director and chairperson of the primary Red Cross Society organization, says about formation leaders V. Yashchenko, M. Fedoseyeva, S. Romanets and other public health activists. They help medical personnel on blood day by registering donors as they arrive at the blood donor center and making dressings. During influenza epidemics they help vaccinate workers and employees. They participate extensively in the work of the health service's epidemiological center.

Z. Kuz'menkova, chairperson of the primary Red Cross Society organization, sees the success of the Minsk Tractor Plant's medical aid teams and medical stations to no small degree to have been achieved by continuous practice on the part of formation personnel as well. Medical aid teams and medical station personnel make the rounds of individual households; they do duty in shops, housing facilities, schools, pre-schools, workers' recreational areas, stadiums and summer and winter sanatoriums. They are active as public health inspectors and are always prepared to render medical first aid in their shops and departments. It occurs as no coincidence that the Minsk Tractor Plant's best medical aid teams and medical station personnel have been prize-winners in rayon and city competition for the past 10 years now.

Attaching great importance to the daily activities of medical aid teams and stations and pointing to the role these activities play in preparing formations for operations in emergency situations, the congress set the societies' committees the task of involving teams and stations more extensively in the practical work of our public health institutions.

The societies' committees are participating jointly with public health agencies in instructing the population, including that portion of it in the residential sectors, in methods of self- and mutual assistance. The congress pointed in its resolution to the need to intensify this effort.

The report and delegate speeches also dealt with the activities of the USSR Union of Red Cross and Red Crescent Societies in connection with the education of the rising generation in matters of health, morals and patriotism. Young public health activists trained in the medical and public health circles of their schools, young people's clubs and vocational schools are extensively involved in the implementation of programs of preventive care and therapy in educational institutions; and they sponsor the war and occupationally disabled and participate in the competitions for medical aid stations and the Zarnitsa and Orlenok all-Union military sports games.



It was at the same time pointed out that the quality of the training provided our young public health aktiv is not measuring up to the requirements being imposed upon it, evidence of which is provided by, among other things, the finals of the Zarnitsa and Orienok games. In this connection the congress directed the societies' committees to strive for the formation of medical and public-health circles in all schools and to assist and monitor more closely the medical and health training of medical station and team personnel.

In conclusion the congress expressed its firm belief that, inspired by the historic decisions of the 26th Party Congress, all members of the Union of Red Cross and Red Crescent Societies will make a worthy contribution to the cause of maintaining the health of the Soviet people.

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## CIVIL DEFENSE

### LOCALIZATION OF ACCIDENTS, EMERGENCY RESTORATION OPERATIONS DESCRIBED

Moscow VOYENNYE ZNANIYA in Russian No 9, Sep 81 (signed to press 10 Aug 81) p 23

[Article by Colonel V. Komarnitskiy: "Localization of Breakdowns"]

[Text] Emergency restoration operations on municipal power systems which have been hit by total, serious or only moderate breakdowns and disruptions of service consist in the installation of temporary alternate lines in sections of the systems which have been put out of service. In the case of only slight or partial disruptions in the moderate category, the objective must be to restore damaged lines and facilities and reconnect them for service quickly even if not at full power. But it is necessary first of all to localize the trouble.

Performing these operations will be special nonmilitary formations formed from operations, emergency and repair brigades from sections, services and other organizations responsible for the maintenance of water, sewer, gas, electric power and heating systems.

Let us now look at the methods employed to localize a problem when municipal power systems break down or are disrupted.

Water supply. Disruption of the flow through water mains and distributing lines will cause the flooding of land and blast and fallout shelters, wash out roads and cause other damage. Inadequate supplies of water, on the other hand, will paralyze operations being conducted by a variety of civil defense organizations, among them our fire-fighting, medical and antichemical units. The number of victims in a center of destruction may rise as a result. That is why it is important to establish the location and nature of any damage quickly and to begin operations without delay.

Damaged sections (lines) are disconnected in the following order from those remaining undamaged by means of gate valves installed in the nearest wells: first, the gate valve in the damaged main is shut off in the direction of the pressure head (feeder pumping station); the valve in the main leading from the other side of the section is then shut off and finally the valves are closed in the lines branching from the main.

In shutting off these pipes it is necessary to wait for a certain period of time to avoid causing water-hammer damage to the line.

In lines branching from a main and leading to residential sections and individual buildings, close gate and shutoff valves located, as a rule, in basements or at points of connection with standpipes and through which water is supplied to apartments. It should be kept in mind here that large buildings may have several lead-ins through which water is supplied to the general distribution system.

The entire system should be shut off in the case of major damage when it is not possible to localize mass-scale disruptions quickly. Water in blast and fallout shelters will be pumped out into ditches, sewers and other low-lying areas. Fire hoses and the metal pipe connected to the nearest fire hydrants may serve as temporary drainage lines. These pipes should be equal or slightly smaller in diameter than those which have been damaged.

**Electric power supply.** In the case of disruption or damage to electric power facilities and systems it is necessary first of all to cut off power at the substations and transformers nearest the site of the disruption and at the lead-ins to individual buildings by means of automatic breakers or the manual knife switches, disconnect the fuses and cut the wires of low- and high-voltage (up to 380 V) systems.

Power is cut off to damaged sections of a system in both directions from the point of the damage (accident). If a damaged facility is supplied by several lines, they must all be disconnected.

When the trouble has been localized, attempts may be made to restore damaged lines temporarily. This, of course, does not apply to facilities which have suffered heavy damage.

**Gas supply.** In the case of disruption or damage to gas-system facilities or lines it is necessary first to determine the extent of the gas-contaminated area and put up warning and demarcation posts to keep people from lighting fires, smoking etc. within it and to evacuate people from the danger zone. Work then begins on localization of the problem by trying to avert the gas contamination of areas and facilities people might be occupying and the possibility of more damage and fires.

It is necessary first of all to shut off broken and damaged facilities and sections of the supply system. To accomplish this, gas valves are shut on both sides of the damaged section or the water seals nearest the point of the break on the damaged mains flooded with water. Gas lines for individual buildings, sections and enterprises may be shut off from the supply system by the gas shut-off valves or water seals on the lead-ins and lines branching from the main.

If a system inside a residential building is damaged, individual apartments or entire stairwells are shut off by closing the gas cocks.

In the case of large-scale damage it may become necessary to shut off individual areas or an entire city gas system. This is done at gas storage facilities or the city's gas distribution station.

To prevent gas from escaping from gas lines which have shut off, wooden plugs are driven into the ends of the pipes and then covered with asphalt, bitumen or other quick-hardening material.

If the gas at a broken section of a pipeline has ignited it is necessary first of all to reduce its pressure by closing a shutoff valve (cock) or running water into the water seal. It is also necessary to see that the flame is not drawn inside the pipe. It then has to be extinguished with wet canvas or burlap and simultaneously doused with water and covered with sand or dirt.

Heat supply. Damage to heat-supply facilities and systems may cause the flooding of blast and fallout shelters and injuries to people from hot steam or water and put out of operation the baths, decontamination facilities and other enterprises which would be responsible for organizing medical care for people and the decontamination of clothing and transport.

Localization of trouble here involves first of all shutting the damaged main off from the rest of the system by closing the shutoff valves nearest the damaged section located between it and the station (boiler facility). Shutoff valves are then closed at the trouble spot. Hot-water heating systems require the closing first of the shutoff valve on the supply line and then on the return. This sequence need not be followed in the case of steam lines and condensers.

Heating systems for residential buildings and sections are shutoff by valves (stopcocks) on lines branching from the main and in boiler facilities and central heating and power plants. Damaged sections of residential heating systems are shut off from the rest of the system by valves and stopcocks or by driving in seals or plugs.

Sewers. In localizing damage to sewer systems and facilities it is necessary to prevent the escape of waste water onto open ground and to put back into service as quickly as possible the section of the sewer line lying above the point of the break. To accomplish this, waste water from the damaged section is allowed to run off into neighboring sewer systems still in good condition or through an emergency channel cut through to the nearest water basin.

If there is no permanent bypass or sanitary regulations do not permit sewage to be discharged into a water course or basin, temporary bypasses (gravity-flow or pump-operated) are constructed between the damaged and undamaged lines, from a domestic-sewage system, for example, to a storm-sewer system.

To prevent foul sewage from flowing into a basin from a storm sewer, a return bypass is built below the trouble spot between the nearest drains of the damaged system to the bypass of the damaged section. This requires cutting openings in the walls of the drains at the level of the adjacent bypasses. The ends of the pipes leading from the drain to the damaged section are sealed shut with wooden plugs, boards or sandbags.

Temporary bypasses may also be constructed by building dams taking terrain features into account. Waste pumps and other machinery are used to pump sewage out of flooded blast and fallout shelters.

Success in work done on municipal power systems will always depend to a great extent upon the skill and experience of the personnel of emergency engineer organizations, upon their skillfully organized cooperation with CD formations of other specialties and upon the degree of mechanization and organization brought to the conduct of urgent emergency restoration operations.

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## CIVIL DEFENSE

### ADAPTATION OF BASEMENTS TO SHELTERS DESCRIBED

Moscow VOYENNYE ZNANIYA in Russian No 9, Sep 81 (signed to press 10 Aug 81) p 26

[Article by Colonel Engineer P. Orlov: "Adaptation of Basements for Shelters"]

[Text] I would like to put forward a few recommendations based upon the experience we have gained here in our republic [Lithuanian SSR].

First of all, we can usefully adapt for shelters our facilities for storing vegetables and other produce, stock and equipment and noncombustible materials; home and public dining facilities; schools and other areas in public buildings; book and film libraries; basements; cellars; separate storage facilities and areas on the ground floors of special-purpose buildings.

For fallout shelters to support human vital activity over a period of several days they must have facilities to accommodate all those sheltering there, a medical care station, ventilation chambers and a place to store contaminated clothing (Figure 1).

Dimensions of the areas given over to the medical aid station, ventilation chambers and contaminated clothing storage and of their equipment will depend upon shelter capacity computed on a basis of  $0.7 \text{ m}^2$  of floor space per person. For example, the total floor space of an area to be adapted for a fallout shelter is  $140 \text{ m}^2$ . It will accordingly accommodate 200 people. But we have to take into account here the fact that  $40 \text{ m}^2$  of this total floor space will be allotted for the medical aid station, the ventilation chamber and contaminated clothing storage.

The height of facilities to be adapted for shelters should, as a rule, be at least 1.9 m measured from the floor to the bottom of any projection from the ceiling.

In fallout shelters without sewers and accommodating fewer than 20 people, we may provide, instead of a medical aid station, an area for carry-out containers (figuring 4 l. per person) for trash and human waste. It will be set off by partitions and provided with exhaust ventilation.

Areas for contaminated clothing storage are best located directly at entrances and enclosed by fireproof partitions. The total area to be allotted for them is computed on the basis of  $0.07 \text{ m}^2$  per person. If a shelter accommodates fewer than 50 people these areas will not be necessary. It will in this instance be entirely sufficient to use a rack by the entrance for contaminated clothing and cover it with a screen or curtain.



Figure 1. Scheme of mechanical-force ventilation: 1 - accommodations for shelterers; 2,3 - medical aid station; 4 - ventilation chamber for air intake system; 5 - ventilation chamber for exhaust system; 6 - contaminated clothing storage.

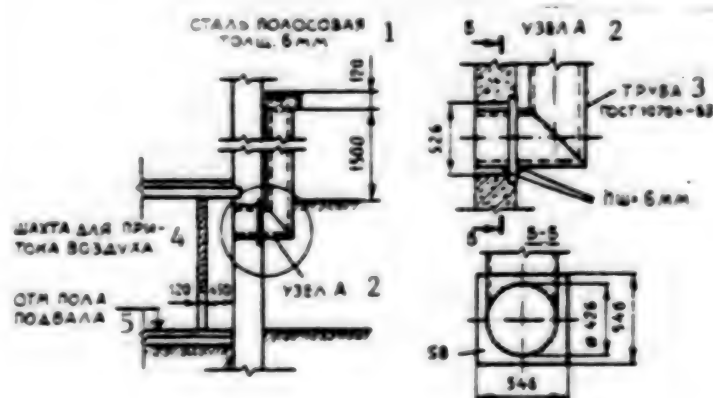


Figure 2. Ventilation shaft for air intake and removal with natural ventilation of shelter for 25 people. Two metal shafts (dimensions in mm) would be installed for shelters for 50 people. 1 - 6 mm steel strip; 2 - structure A; 3 - pipe (GOST 10704-63); 4 - air intake shaft; 5 - basement floor level.

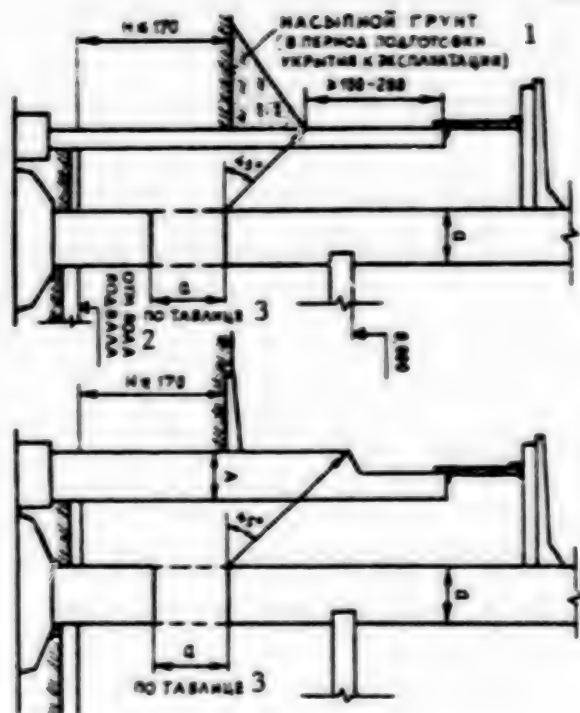
Ventilation for a fallout shelter accommodating more than 50 people should, as a rule, be mechanical-force ventilation computed on the basis of an air supply of  $10 \text{ m}^3/\text{h}$  per person. Electrically driven industrial fans or ERV-72 electrical-manual fans may be used for this purpose. In the former case we would provide for a backup system of natural ventilation computed on the basis of an air supply of  $3 \text{ m}^3/\text{h}$  per person; this system would employ the air ducts of the building or structure in which the shelter is located. This kind of backup system would be unnecessary in the second instance.

For a shelter accommodating fewer than 50 people we would provide natural ventilation figuring on an air supply of  $15 \text{ m}^3/\text{h}$  per person. Intake-air vents should be located toward the floor of the facility, the exhaust vents in the upper portion 2 m from the intake vents.

Ventilation shafts (Figures 2, 3) are built for air intake and removal in the case of both mechanical and natural ventilation systems. To prevent radioactive dust from falling through the air intake and exhaust ducts of the ventilation systems these ducts are covered with deflecting hoods.

If a shelter area is not heated in peacetime, space should be allowed for the installation of emergency auxiliary heaters (gas or electric heaters or furnaces).

Fallout shelters may be supplied with water from either internal or external systems. If there is no water supply line, we allow space for portable tanks (calculating on a basis of 6 l of drinking water per person). Shelters will also require the construction of lavatories with waste-water drainage into external sewer systems. Shelters without sewers will have lavatories ["powder closets"] or cesspools for human waste disposal. Cesspool capacity is figured on the basis of at least 4 l per person. A tightly sealed container will be employed to hold human waste in facilities without sewers which are to be adapted for shelters for up to 50 people.



Existing electric power supply systems are used to provide shelter illumination. Portable light sources are permissible in only exceptional circumstances.

And finally, of course, every shelter must be equipped with radio. If a facility has no room speaker, a receiver should be installed in the process of bringing the shelter into its state of readiness.

Figure 3. Ventilation shafts for air intake and removal by mechanical ventilation for shelters for 100-500 people (design in existing buildings). 1 - fill dirt (during period in which shelter is being readied for occupation; 2 - basement floor level; 3 - per table.

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## CIVIL DEFENSE

### DEP CHIEF FOR MILITARY TRAINING, USSR CIVIL DEFENSE ON IMPROVING TRAINING

Moscow VOYENNYE ZNANIYA in Russian No 10, Oct 81 (signed to press 9 Sep 81) pp 12-13

[Article by Lieutenant General D. Mikhaylik, deputy chief of USSR Civil Defense for combat training: "For Effectiveness and Quality in Training"]

[Text] In this article I would like to discuss with VOYENNYE ZNANIYA readers the question of how to improve the quality of our training and instruction, how to make it more effective, more interesting and more meaningful.

Over the past two years we have gained no little valuable, instructive experience in our production facilities in the way of both the accomplishment of general civil defense tasks and in organizing the training process. Practical, concrete experience is available in preparing for and conducting combined exercises, civil defense day activities, conferences on science and practice and competitions for nonmilitary formations. Contributing to this result has been the extensive socialist competition organized in honor of the 26th CPSU Congress.

Let's take, for example, Penza's Elektromekhanika works (V. Zhilinskiy, CD chief; V. Ignatov, party committee secretary; V. Kotov, CD chief of staff). And what's interesting about this plant? First of all, the efficiency with which it plans its CD activities. As a rule, the training plan is developed by the staff under the immediate direction of the director and with the participation of the plant's service chiefs and representatives of its trade union and Komsomol organizations. The draft is coordinated with the plant's economic and social development plan, this coordination detailed in the subdivisions of the enterprise with reference to time and place taking into account the material base available and the number of trainees. Special care is taken to coordinate the times of joint facility and special tactical exercises and the days for holding methods training meetings and command training for senior and command and supervisory personnel. After being approved, the plan has the force of law, its implementation being continuously monitored by the CD staff. All activities are therefore conducted at their scheduled times, without disruptions and without any last-minute crash efforts. The plant has achieved high levels of worker and employee attendance at practical training exercises; now imposed upon each one of them is a greater personal responsibility for preparedness to provide protection against weapons of mass destruction and for the readiness of their shops and facilities overall.

The plant has a good material training base, which is being continuously improved and updated. The training ground, blast shelter and classrooms are never empty. Workers, employees and formation personnel practice the proper actions to take at CD warning signals and are mastering the procedures and methods employed in conducting rescue and



urgent emergency restoration operations, learning to direct the occupation of protective structures quickly and without commotion and improving their qualities as fighters, their resourcefulness and their ability to evaluate a situation quickly and make the proper decisions.

We should also take note of the practice here of holding CD day activities, which are reviews of the readiness of the nonmilitary formations and shop and department personnel to perform their civil defense tasks. They provide occasions for formation competitions and qualifying performances in satisfaction of CD and GTO [Ready for Labor and Defense] norm requirements.

Overall this plant provides an example of a creative approach to the accomplishment of civil defense tasks. They are not activities conducted in isolation here, but rather as an integral part of general, plantwide activities, which is obviously a great credit to the plant's directing personnel, party committee and CD staff. They have seen and felt their own responsibility for preparing their personnel to protect against modern-day weapons and insure the stability of plant operations under special conditions.

The same kind of organization prevails in connection with the CD training programs at the Krasnovodsk TETs imeni 50th Anniversary of October, the Tashtekstil'mash plant imeni Yu. A. Gagarin (Tashkent), the Belka factory (Kirovskaya Oblast) and other of our leading facilities. The experience they have gained should be extensively publicized, with vigorous efforts to introduce it into the practice of those enterprises where, through the fault of management, personnel civil defense training has yet to be properly organized.

Right near the Elektromekhanika plant is the Penza machine-building works (V. Roshchupkin, CD chief; Yu. Bol'shakov, chief of staff). But look at the difference in their performance. While Elektromekhanika has set up a well planned, smoothly operating training program, 1981 saw the machine builders for all practical purposes shut theirs down. Senior personnel are not being trained. Special tactical formation exercises are being reduced to basically administrative, housekeeping operations and cleaning up the trash on plant grounds. The director does not concern himself with civil defense matters personally and does not require any personal involvement on the part of others. Not sensing any direction or exactingness on the part of comrade Roshchupkin, CD chief of staff Yu. Bol'shakov has been performing poorly in discharging his own operational responsibilities.

We could say the same thing about the Relay and Automatic Equipment Plant (Tashkent). Because of a lack of demandingness on the part of its director, V. Babayev, the CD chief of staff at this plant, V. Zhukov, has only been creating the appearance of having been doing something, while the fact is that for all practical purposes he has been doing nothing. All this has been going on right under the noses of the rayon, city and oblast CD staffs, which have given no effective assistance to this facility which has fallen off the pace; they have done nothing to make the fund of practical experience Tashtekstil'mash has acquired available to Relay and Automatic Equipment personnel.

The valuable practical experience the Penzenskaya, Kostromskaya and Kirovskaya Oblast staffs have gained has been poorly generalized and implemented in practice. How else are we to explain the fact that right in the immediate vicinity of the leading facilities here we will also find some giving their workers, employees and kolkhozniks no training whatsoever (Bor'ba kolkhoz, Serdobskiy Rayon; Kamenskiy and Golovashchenskiy sovkhoses, Kamenskiy Rayon, Penzenskaya Oblast and the kolkhozes Leninskiy Put', Nerekhtskiy Rayon, Kostromskaya Oblast and Zarya kommunizma, Slobodskiy Rayon, Kirovskaya Oblast).

Analyzing, generalizing and then disseminating experience constitutes a key task for all civil defense staffs and services. We should look upon this as an important way to improve our training. By employing this technique skillfully and efficiently we will be able substantially to increase both the effectiveness and the quality not only of individual drills and exercises, but of our entire training program overall.

The materials of our party's 26th Congress and the decree of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee, "All-Union socialist competition for successful fulfillment and overfulfillment of Eleventh-Five-Year-Plan quotas," attach great importance to studying and widely disseminating anything new, anything representing a step forward. Let us reiterate: in the course of our competition for training effectiveness and quality we need continuously to be analyzing and generalizing upon the fund of practical experience our leading performers in civil defense have accumulated and then boldly introducing these innovations in facilities which have fallen behind. In this connection we should also be singling out for special attention and thoroughly describing the modus operandi of CD chiefs such as comrade Zhilinskiy, whom we have mentioned above, and the organizational work being done by the CD staffs and services of our competition-winning enterprises.

Further improvement of the effectiveness and quality of our training will to a great extent depend upon the level of preparation and training of senior civil defense personnel and of those responsible for running our training programs. This category, as we know, receives its training through courses of CD instruction and in the course of facility drills for senior personnel.

There is an extensive system of such training programs in operation throughout the country. Many of them (for example, the Georgian, Latvian and Lithuanian republic-level programs; the Khabarovskiy Kray courses; the Khar'kovskaya Oblast programs among others) conduct their methods training activities and student training taking present-day requirements into account. Involved in a creative effort here we find people interested in their work, people who know how to vary the training routine and make the instruction interesting, intelligible and memorable. A material training base has been built up here and maintained in exemplary order through the concerned efforts of course supervisors, instructors and on-the-job training supervisors. And now presenting themselves ever more urgently are the problems of improving the quality of the training provided; analyzing, generalizing and disseminating experience and staffing the courses with temporary instructors. Much is being done to insure that trainees develop a thorough comprehension of both the theory and the practice of conducting civil defense operations and that they then competently apply the knowledge and skills they have acquired in their work at their own facilities.

CD course programs, particularly city- and rayon-level courses, provide valuable methodological assistance to our production facilities in preparing for joint facility and other exercises, while they conduct practical drills on site for individual categories of trainees.

The problem now is to insure that CD chiefs and staffs efficiently plan for and at the proper time send for training the right groups of trainees, verify their arrival and take a deeper interest in the activities of the courses involved. Worthy of attention in this regard is the good example provided by N. Antipov, CD chief for Penza's Oktyabr'skiy Rayon and full-time course instructor. He is frequently here rendering assistance in the development of a training base, checking on fulfillment of the group manning plan, interesting himself in the status of methods work and instructing and talking with trainees.

Unfortunately, however, CD chiefs and staffs are still not demonstrating the necessary concern for these course programs. The courses in Belgorod's Oktyabr'skiy and Sverdlevskiy Rayons and in Gubkin, Belgorodskaya Oblast, for example, have for many years now been held in unadapted semibasement facilities where it would not even be possible to equip classrooms properly. This naturally has a negative impact upon the training process. We must assume that the people in Belgorodskaya Oblast will be doing everything necessary for these courses to acquire new facilities in the coming training year.

Senior personnel and specialists throughout the economy also undergo civil defense training in their advanced vocational training institutions. But there remains untapped potential here as well. Instructional methods and training materials, equipment and facilities require further upgrading. To increase the effectiveness of the training here will require more extensive introduction of technical training aids.

Facility methods training assemblies and command-level exercises held directly on site for senior and supervisory personnel constitute an important means of upgrading and reinforcing knowledge acquired during these course programs. They have been tested in practice and have well proven themselves. But we have yet to see all facilities planning and conducting these exercises and activities in an efficient way. This is no easy thing, of course. It would be much simpler to send a person off to a course and have that be the end of any local concern or responsibility. The thing is, though, that these courses are in no position to provide training for everybody at the same time. In addition, it would be impossible for them to familiarize trainees in detail with all the special characteristics of the production operations of the facilities they come from.

The primary objective of exercises held at the individual facilities themselves consists, therefore, in defining the theoretical principles underlying civil defense in concrete terms taking into account the specific characteristics of individual production and administrative operations. This training will accordingly be specific, goal-oriented and conducted in the immediate vicinity of the work place. It offers great possibilities for our practical instruction of personnel in methods of providing protection against weapons of mass destruction in the course of performing production tasks by making use of plant grounds and the structures and lines of communication on them as a training ground.

We see further improvement of methods employed in conducting joint facility exercises as a good way to enhance training effectiveness. These have become a well established practice. We must make sure that in the course of these exercises each participant in them has a thorough understanding, a keen awareness of the responsibility which will rest with him under extraordinary circumstances, what action is to be taken to rescue victims and to insure the timely performance of other tasks and of what might possibly be encountered in an area sustaining a variety of types of damage. The fact is that these conditions will demand great discipline and vigorous action, skilled and confident performance and the exertion of maximum physical and moral forces. This is the primary objective which a facility CD chief and his staff must bear in mind in organizing an exercise.

Finally, a brief word about the material training base. This is one of the factors making for good-quality, effective training of all groups within the population in the practical performance of civil defense tasks. Only a good training base will make it possible to create conditions of the necessary complexity for exercises and drills. It should be emphasized that with the publication of "Regulations Governing the Civil Defense Material Training Base" we have seen a substantial intensification of efforts to upgrade it and these efforts begin to show signs of good planning. Over the past



year and a half there has been an increase in the number of training grounds, training centers, training classrooms (study centers), corner centers and motor clubs for CD course programs. They are now being more fully and effectively utilized in the course of the training process.

But we are far from accomplishing everything we can. We have not only to add to our training base, but also to take good care of what we already have and to get the greatest possible use out of each training facility. We are still seeing training areas built earlier not only being upgraded, but--quite the opposite--being allowed to become completely unusable because of inattention and poor management. This, of course, we cannot tolerate. It should be understood that the interests of this effort require of all CD personnel a demonstration of particular concern for the development of a strong training base. Most timely in this connection has been the discussion in the pages of this magazine of Voronezh's experiment with the building of a training center. I think a businesslike discussion and, most importantly, the adoption of innovative ideas, will be of great benefit.

The training year has come to a close. We must now put October and November to productive use in general preparation for the coming training year and to make it a year of effectiveness and quality throughout the whole civil defense system.

We must bear in mind that we are dealing with the working man, who, as Comrade L. I. Brezhnev declared in his report to the 26th CPSU Congress, constitutes the basic, invaluable wealth of our society. To provide him thorough training in protection against weapons of mass destruction is our direct duty and high responsibility.

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## CIVIL DEFENSE

### FORMATION COMMANDER TRAINING DISCUSSED

Moscow VOYENNYE ZNANIYA in Russian No 10, Oct 81 (signed to press 9 Sep 81) pp 14-15

[Article by Colonel V. Vasin: "On-Site Training, Remarks on Formation Commander Training"]

[Text] The training of nonmilitary CD formation commanders and the development in them of the necessary methodological skills is a complex and crucial task. To accomplish it fully over a brief period of training in CD courses is practically impossible. The most important school will accordingly remain the production facility, where command-level training is held annually taking into account the special characteristics of local production operations.

To organize this kind of training, however, is far from being any simple matter. While groups of commanders of related formations (rescue, reconnaissance, technical-emergency formations and others) can be formed at large facilities, this is difficult at small ones. Drills for formation commanders here are frequently held for a single combined group, which does not provide the proper training for each individual specialty.

So what is to be done? It will be necessary in these cases to form training groups based at several facilities forming part of a single production association and standing in a production relationship with one another or located in the same general vicinity. Then a group of reconnaissance commanders, for example, can drill at one facility, one of antiradiation and antichemical formations at another, a group of technical-emergency formations at a third and so forth. Training organized like this is more directly goal oriented, more relevant to the individual specialties, since trainees study only those problems included in the program for that particular category, and permits more efficient use of the material training base, including special-purpose classrooms or training sites (parts of a training ground). It also creates better conditions in which to prepare for instruction and the instructors themselves. And specialists will be running them.

But what do we have to do to realize these possibilities?

In organizing annual training for commanders of small-enterprise formations we should first, in our view, make more extensive use of practical experience accumulated in the process of planning and conducting joint exercises for groups of small facilities. In planning these exercises together with facility staffs, rayon CD staffs as a rule make provision as well for training for the senior and supervisory personnel of all facilities participating in the exercise. For this purpose they form special training groups.

Instruction for formation commanders at this time is usually conducted by on-the-job training supervisors and service specialists in CD courses or directly on site at the individual facilities themselves.

It is clearly to our advantage as well to utilize this experience in the process of planning annual training for formation commanders at these facilities by forming groups on the basis of related specialties. Rather than by on-the-job training supervisors, this training will be conducted by previously trained instructors selected from among the more experienced CD chiefs of staff and service chiefs.

Practical experience suggests that in a number of instances the commanders of small-facility formations may be grouped with related training groups from large facilities or those located in the immediate vicinity. This is what is being done in the Moninskiy worsted goods combine (Moskovskaya Oblast). In planning their command-level training, the CD staff of this facility incorporates in its own training groups the commanders of formations from small neighboring enterprises which cannot form complete groups for each individual specialty. Through being able to train at the combine's well-equipped facility under the direction of experienced instructors, they acquire the knowledge and methodological skills they need to provide training and instruction for their own personnel. This kind of sponsored assistance to small enterprises on the part of larger ones merits attention. It would be desirable for rayon CD staffs to be the real organizers here.

These are only two possibilities. There may be others. We have only to think, analyze and then generalize our experience.

It is no less difficult to organize annual command training in rural facilities. These still present a great number of organizational complexities. In addition to training provided at these facilities themselves, formation commanders here also receive training in brief CD courses. Training groups are formed on a sectional basis for individual specialties, and on-the-job training supervisors and rayon service specialists then come out to them. They also help train commanders directly in the process of preparing for joint exercises in village and settlement soviets. Chiefs of services also become extensively involved in this effort.

It is clear that in solving the complex problem involved here we must take into account the course experience which has been gained in conducting sectional training and training immediately preceding joint exercises in our rural soviets. By consolidating this organizational base it will become possible to organize training for formation commanders entirely on the basis of specialty.

An interesting fund of experience has now been accumulated in Belgorodskaya Oblast's Yakovlevskiy Rayon. Concerned with training for formation commanders here are the CD staff and rayon CD chiefs. The chief of the agricultural directorate, for example, N. Nemtsev, who heads the crop and livestock protection service, and his staff of specialists regularly conduct practical and special tactical exercises for their formation commanders drilling thoroughly in all areas covered by the program for this specialty. For this purpose they use the training area, materials and equipment on their leading farm, which also serves as the base training facility for CD courses in Belgorod's Oktyabr'skiy Rayon.

There is no doubt that command training directly on site at individual production facilities makes possible the reinforcement of knowledge acquired during courses of CD instruction and continuous improvement of the methodological skills of our nonmilitary formation commanders. Effective training for personnel is impossible without this.

Facility staffs and CD services should take every possible advantage of the experience accumulated by our civil defense courses, which with instructors and on-the-job training supervisors conduct regular training in instructional methods and hold demonstration and outdoor training sessions.

Is it possible to carry on activities like this at individual production facilities? In most instances it is. We need only to plan how, when and where to organize them and coordinate them with the training program for a particular category.

Instructional methods training in specific areas is of great benefit, particularly for newly selected commanders. Here they come to an understanding of how to structure a given area of instruction, where it will be best conducted and in what sequence various topics should be covered in a course of training. It is important that formation commanders themselves develop a clear understanding of what they should require of their trainees and how they go about achieving these results. It is also important to train commanders to become competent in the preparation of meaningful lesson plans, as is T. Golovakhin, assistant director of civil defense at Penza's compressor plant. Himself possessing a rich store of methodological experience, he shares it generously with those he is instructing.

Organizational effort, high levels of exactingness on the part of rayon and facility CD staffs and chiefs of CD services and timely methodological assistance to those bearing instructional responsibilities--these are what are of extreme importance now.

Again in Penza, we are now seeing a popularization of the experience of V. Kotov, CD chief of staff of a precision electrical equipment plant. Under his direction materials on methods have been written up and duplicated which are then distributed to instructors for use in connection with conducting training or special tactical exercises. This fills in gaps in the published literature. These materials point out a specific location within a facility for conducting training, provide recommendations concerning methods taking into account the special characteristics of particular shop operations, the specific nature of the production involved and the availability of training materials, equipment and facilities.

In a word, the organization of command-level training at individual production facilities is a complex and urgent task. It requires efficient planning, great organizational efforts on the part of rayon and facility staffs, a search for new forms and methods of training, thorough study and generalization from the experience gained by the leading rayons and facilities and determined efforts to eliminate deficiencies in the training of formation commanders.

FROM THE EDITORS: In his remarks the author has raised some critical questions concerning the training provided our nonmilitary formation commanders. It would be desirable for facility and rayon CD chiefs of staff and chiefs of CD services, civil defense course personnel and nonmilitary formation commanders to express their views and share their own experience.

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## CIVIL DEFENSE

### WHAT TO DO IN CASE OF AN ACCIDENT

Moscow VOYENNYE ZNANIYA in Russian No 10, Oct 81 (signed to press 9 Sep 81) pp 18-19

[Article by N. Smirnov, senior CD course instructor, Moskovskaya Oblast: "In Case of Emergency"]

[Text] At the request of numerous readers for assistance to course instructors we are publishing material which may be used in conjunction with study of the topic "Dealing with the Aftermath of Accidents at Facilities Using Highly Toxic Substances (SDYaV) in their Production Operations."

The program calls for group exercise in conjunction with this topic. The objectives of this exercise are to study actions to be taken at a facility to deal with the aftermath of a possible accident, to improve the performance of senior and supervisory personnel in this situation and to practice coordinated operations with the city (rayon) civil defense staff and the staffs of those enterprises whose formations could be brought in to help deal with such an emergency.

The highly toxic substances we are dealing with here include, among others, chlorine, ammonia, hydrocyanic acid, sulfur dioxide, nitric acid, carbon disulfide, hydrogen fluoride and carbon monoxide. Facilities having these substances also have steps pre-planned to insure work safety and to eliminate a center of chemical destruction in the event of an industrial accident.

The instructor familiarizes trainees first of all with the plan for protecting enterprise personnel in the event of an accident. Development of this plan and evaluation of a probable situation proceed on the basis of the possibility of removing all highly toxic substances in the facility while simultaneously dispersing high concentrations of any vapors given optimum meteorological conditions (a wind speed of 1 m/sec, degree of vertical air stability--inversion).

The plan describes the nature of the SDYaV [HTS] involved and indicates the shops, storage facilities and lines containing these substances. It evaluates the possible chemical environment to be encountered in the facility in the event of an accident and estimates the manpower and equipment this will require, to include that to be brought in from other enterprises in the city.

Trainees should also be familiarized with procedures to be employed in alerting senior and supervisory civil defense personnel and the workers, employees and surrounding population in the event of an emergency; bringing nonmilitary formations to a state of readiness; sheltering people in protective structures and in their use of individual



protective gear and in evacuating these people out of the center of destruction and the zone of dangerous contamination. All this information is contained in the plan.

The plan also outlines procedures to be employed in reconnaissance, identification and localization of a center of destruction; the organization of observation of the spread and concentration of HTS vapors and measures to give timely warning to the population of the dangers involved; procedures for conducting rescue and urgent emergency restoration operations and providing medical aid to injured; the organization of operations to decontaminate grounds, structures and equipment and people and safety measures. This plan is developed taking into account the particular nature of the production technology involved and the use of HTS at the given facility and with the participation of all senior specialists.

In explaining the contents of individual sections of the plan, the instructor gives special attention to the importance of timely and accurate warning of any leakage of HTS, including those which might occur at night, and demonstrates the specific procedures and arrangements involved. One particular variant is shown in the diagram.

He then characterizes the highly toxic substances used or manufactured at a given enterprise and discusses the special features of the processes involved in processing, manufacturing and storing them. He points out storage areas and shops, explains the system of transporting HTS and indicates the places which are most dangerous from the point of view of the possible collection of vapors.

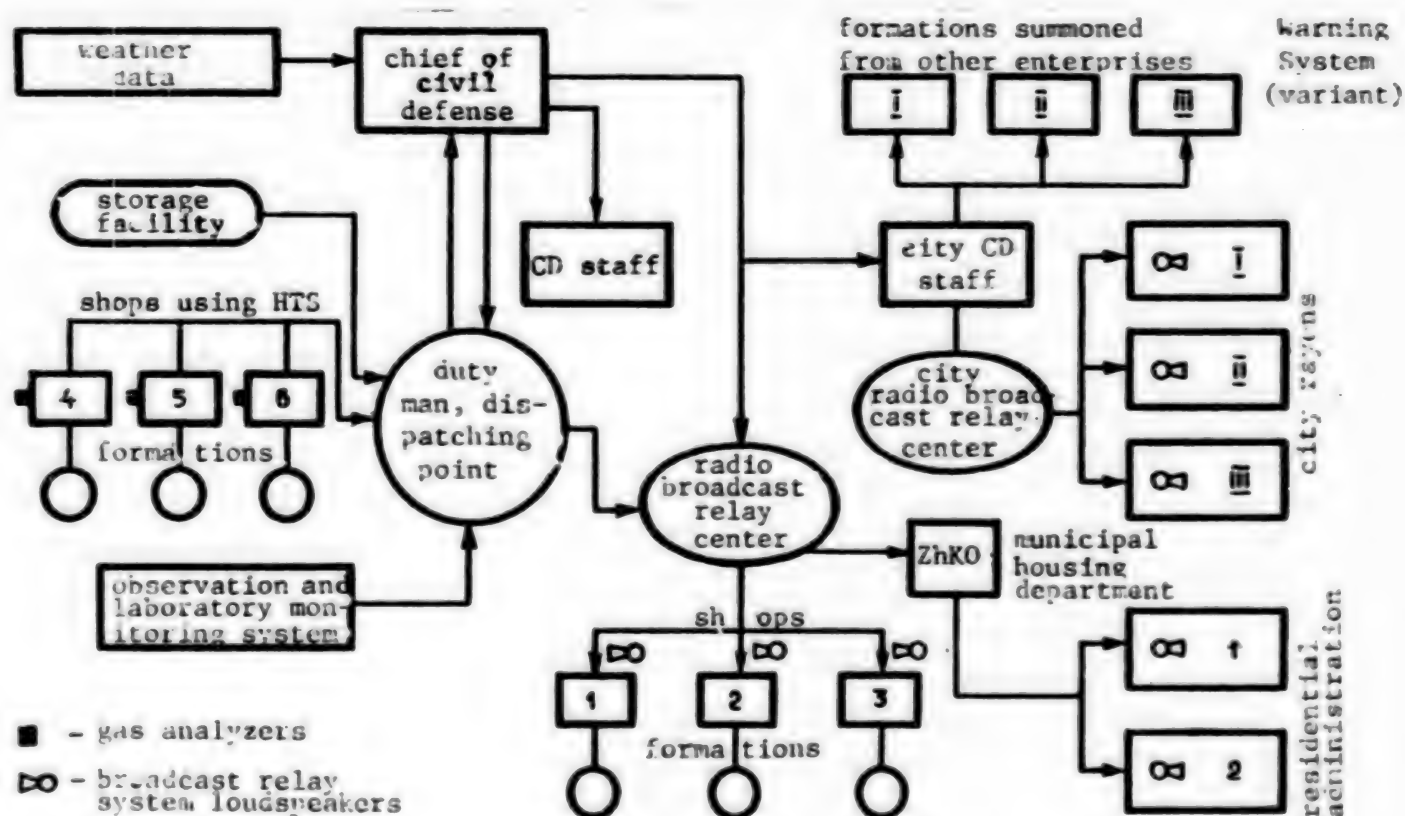
Highly toxic substances are usually stored in liquid or liquefied form in underground or surface-level storage facilities. The greatest danger is of explosions in high-pressure reservoirs and subsequent releases of toxic and dangerously explosive substances into the atmosphere. Elevated pressures are also maintained in lines carrying HTS to industrial production facilities. When these lines are damaged or ruptured the liquid substances quickly boil up and in escaping into the air create high concentrations of vapors in the trouble area.

In presenting this material the instructor might show trainees a sketch of a facility's location with surrounding residential areas, diagrams of the lines carrying HTS from storage facilities to the points at which they are used and the table entitled "Physical-Chemical Characteristics of Highly Toxic Substances."

He underlines the fact that the plan for protecting facility workers and employees can play its role only if the organizational and technical-engineering measures it provides for are taken in a timely manner and the radiation and chemical protection, fire-fighting, medical service and other formations are maintained in a continuous state of readiness. The readiness of special equipment for immediate use and the creation of the necessary stocks of decontamination agents are also indispensable conditions for any successful implementation of the plan.

Before he begins his discussion of actions to be taken by management; senior, supervisory and formation personnel and enterprise workers and employees with the development of an emergency situation, the instructor should, in our view, deal with a question such as evaluation of a chemical situation. In covering this topic he should employ the group exercise method, which will have all trainees play the role of chief of one of the facility's services or commander of a combined antiradiation-chemical protection detachment (team, group) employed to deal with the emergency. Subsequent decisions and actions may seem inadequately justified without this.

After evaluating the situation, trainees report their conclusions, which the facility civil defense chief needs to make his decisions on action to take in dealing with the emergency. They indicate, among other things, to what extent the situation might impair the operating capacity of the enterprise and what has to be done to restore disrupted production operations and prevent injuries among workers, employees and the population in the vicinity.



Considering the special nature of the effect of harmful concentrations of HTS vapors, the effort to deal with the emergency begins immediately. The efforts of technical personnel and nonmilitary formations in this connection are directed primarily toward preventing any further spread of the substances and localizing the existing trouble spot.

Trainees then cover procedures senior CD personnel should follow in dealing with the emergency. They play the role of responsible personnel working in individual sectors of emergency operations.

The warning procedures are initiated immediately after a leak or release of HTS has been detected. Trainees playing the role of the duty dispatcher report how the signal is to be given. In accordance with the warning system employed, senior enterprise officials and nonmilitary formation commanders first inform themselves of the situation which has arisen. An audio signal warning of the emergency situation is immediately to shops and production sections, which then move to implement protection plans.

A reconnaissance group is dispatched into the contaminated area. At the same time, the center of contamination is contained, workers and employees evacuated and injured rendered medical first aid. If rapid evacuation is not possible, workers, employees and the local population are moved to shelters, which go to a regime of full isolation. Ventilation intake is shut off in production areas within the contaminated area.

Personnel of the gas rescue service and combined radiation and chemical protection detachment (team, group) begin to localize the problem. Trainees in the role of the commanders involved report on the measures they are taking.

The leakage of highly toxic substances is stopped by closing cocks, valves, pipeline cutoffs, blocking devices etc. All pumps maintaining pressure in lines running to reservoirs and equipment are shut off as well. The contents of damaged storage containers are drained or pumped into reserve reservoirs. In the danger area the sprinkler [drenching] system is turned on, which prevents the cloud of toxic gas from spreading; water screens are created; the trouble spot is walled around and cracks and breaks in reservoirs and pipelines repaired. Pits are dug and traps built to collect substances which have spilled out and are spreading and to make it possible then to remove and dispose of them. It should be noted here that in conducting all these operations, non-military formation commanders maintain close contact with technical personnel and senior facility officials and coordinate individual steps with them.

After the trouble spot has been localized, decontamination teams begin to degasify roads and approaches as well as sections of the local terrain and facilities which have been contaminated by liquid HTS. They give special attention to places where vapor might collect on facility grounds and over the course by which they would spread in residential areas. These areas should already have been identified and then, in the case of an emergency, reconnoitered and thoroughly decontaminated.

In working within the center of contamination, formation personnel take certain precautionary measures. Substances in a liquid or liquified state create the greatest hazard. Some of them (ammonia, phosphorous trichloride, hydrogen fluoride) cause burns when they make contact with unprotected areas of the skin. It will therefore be necessary to work in gear which protects the skin. Carbon disulfide and phosphorous trichloride evaporate only slowly when they spill out and so remain for long periods of time at the points where they are released. Special attention is given in these instances to degasification of the substances.

The GP-5 and GP-4u filter gas masks are poor absorbers of carbon monoxide and ammonia vapor. Reduced oxygen levels will be noted in areas where these vapors collect. Personnel working in these areas then use special self-contained industrial gas masks or self-contained filter breathing apparatus.

Trainees should also be reminded that when the vapors of many HTS combine with air they may form highly inflammable and dangerously explosive mixtures. A mixture of air and carbon disulfide, for example, will ignite at a temperature of 26°. This requires special precautions in connection with the performance of welding and other emergency restoration operations, especially in enclosed areas.

At the conclusion of training the instructor sums up the results, evaluates trainee performance and takes note of the most useful suggestions they have made concerning implementation of the plan for protecting facility workers and employees.

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## CIVIL DEFENSE

### FALLOUT PATTERNS DISCUSSED

Moscow VOYENNNYYE ZNANIYA in Russian No 10, Oct 81 (signed to press 9 Sep 81) pp 19-20

[Article: "Evaluating a Situation"]

[Text] In evaluating the chemical situation arising at a facility in the case of an industrial accident we take as a basis our data on the specific leak or release of SDYaB [highly toxic substances (HTS)]. This involves taking into account the weather situation and the conditions under which these substances are stored.

The instructor provides trainees their raw data: the type and quantity of substance which has escaped, the meteorological conditions, features of the terrain on facility grounds and in the surrounding area, conditions under which HTS are stored and the nature of the release involved and the extent to which protection is available and possible for facility workers and employees and the surrounding population.

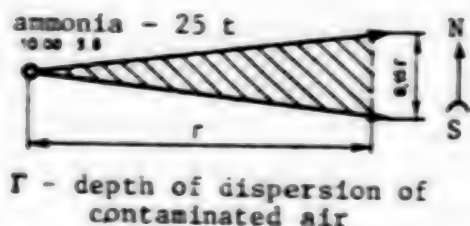
Let us assume a release of 25 t of ammonia. Wind speed is 3 m/sec, wind direction is westerly and the sky is overcast. The terrain on facility grounds and in the surrounding area is level; structures are of the urban type. The storage reservoir is not surrounded by any protective embankment. Protection is available for 100 per cent of the workers and employees at the facility, for 50 per cent of the population in the area; population density is 5000/km<sup>2</sup>.

Trainees first establish the dimensions of the contaminated area, the depth of the spread of air with harmful and lethal concentrations of the substances involved, the duration of their harmful effect and possible losses among the local population.

The center of contamination encompasses the site of the trouble, that is, the escape of the substances from their containers, and the area covered by the spread of contaminated air. In our example the area covered by the ammonia escaping from a container without a protective embankment is  $S = 25/0.05 \cdot 0.68 = 735 \text{ m}^2$  (an area of approximately 27 x 27 m), where 25 is the weight of the ammonia discharged in tons, 0.05 m the thickness of the layer of discharged fluid, a figure conventionally employed for rough computation in the case of problems in storage facilities having no protective embankment and 0.68 g/cm<sup>3</sup> the density of liquid ammonia.



As a rule, the size of the trouble area is defined more precisely by reconnaissance data, which establishes the approximate area over which the toxic substances have spread. We have then in this instance to solve the reverse problem: on the basis of the known area to then compute the weight of the HTS released. The instructor may give trainees the following practice problem. Reconnaissance has established, for example, that ammonia has spread over an area  $30 \times 49 \text{ m}$  ( $1470 \text{ m}^2$ ). The amount of ammonia released in this instance will be roughly  $1470 \times 0.05 \times 0.68 = 50 \text{ t}$ .



Procedure for plotting center of HTS contamination on facility (city) map

require meteorological data on cloud cover and the speed and direction of surface winds. Forecasts are based upon the most probable wind direction and speed for this locality and season. Estimates of the actual center of contamination, however, will employ data from the weather service.

A number of factors will have an effect upon the depth to which contaminated air will spread, particularly the amount of substance released, the degree of vertical air stability (inversion, convection, isothermy), terrain features and the presence or absence of built-up urban areas.

The familiar method is employed to determine the depth to which lethal and harmful concentrations have spread. It is necessary first, however, to establish the degree of vertical air stability. This will

Скорость ветра, м/сек	ночь a			день b		
	ясно d	полужасно e	пасмурно f	ясно d	полужасно e	пасмурно f
0.5	инверсия g			конвекция h		
0.6-2.0						
2.1-4.0	изотермия i					
<4						

Key: a - night; b - day; c - wind speed, m/sec; d - clear; e - partly cloudy; f - overcast; g - inversion; h - convection; i - isothermy

In our example they are given for the day of instruction. Using the chart above we can determine roughly the degree of vertical air stability.

In the example under consideration, on an overcast day with a wind speed of 3 m/sec we will have isothermy. Using the familiar method we find the depth to which

contaminated air will spread with isothermy in a built-up urban area. This figure will be 144 m for ammonia vapor in lethal concentrations, 465 for harmful concentrations.

The figure shows the procedure employed in plotting on a facility (city) map the area of contamination by highly toxic substances, where  $\Gamma$  represents the depth to which contaminated air has spread.

The instructor might pose trainees the problem of computing possible losses among, for example, an urban population living in the vicinity of an enterprise in which an accident occurs. They would first use a layout of the area of urban construction adjacent to the facility to determine the area over which vapors in harmful concentrations might spread. Let us assume it has been established that in the case of a particular ammonia release this area will be  $0.03 \text{ km}^2$ . If the population density is  $5000/\text{km}^2$  and 50 per cent of this population is provided with means of protection (shelters, gas masks), these losses will be expressed by the figure of 75 ( $0.03 \times 5000 \times 0.5 = 75$  persons).

The duration of the harmful effect of HTS is determined primarily by their time of evaporation from the area of the spill. With a wind speed of 1 m/sec this figure for ammonia will be roughly 80 min. Higher wind speeds decrease the evaporation time. The correcting coefficient taking wind into account may be computed in accordance with the following formula:  $K = 0.57 + 0.43v$ , where  $v$  represents wind speed in m/sec.

In our example, the time required for the ammonia to evaporate, that is, the duration of its vapor's harmful effect, with a wind speed of 3 m/s will be approximately 43 min.

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## DOSAAF AND MILITARY COMMISSARIATS

### MILITARY INSTRUCTOR TRAINING DESCRIBED

Moscow VOYENNYE ZNANIYA in Russian No 9, Sep 81 (signed to press 10 Aug 81) p 38

[Article by Colonel Yu. Kovalev: "Faculty Prepares Military Instructors"]

[Text] The Chita State Pedagogical Institute imeni N. G. Chernyshevskiy is preparing basic military training and physical education instructors for secondary and vocational schools.

"There is a great need for them," says rector V. P. Tkachev. "And here in the Transbaikalian region most of all. Not every officer going into the reserves settles down here--the conditions are difficult, it's far from the center.... Somebody has to be responsible for running a school's basic military training program. Who? The best people, of course, are natives of the various localities. And another thing--as a rule, Transbaikalian village schools are small. The number of students would not always make it possible to keep a full-time basic training instructor busy. So what we need is a basic training instructor and a physical education instructor combined in the same person. And people like that are now being trained here and in a number of other teacher-training institutes. In both the physical education and military departments."

The USSR Ministries of Defense and Education worked together in developing the documentation governing training methods: the training plan, programs for military training and methods to be employed in basic military training courses and the principles governing military and patriotic education.

The rectorate, party committee and faculty leaders have taken care to insure that all military department officers take a course of refresher training in the country's leading educational institutions. Material and equipment have been acquired to meet new requirements; among other things, field facilities have been developed and the equipment, materials and military ammunition the students need have been acquired. A typical military office has been equipped as well.

The institute has also strengthened its ties with schools and educational agencies. The military department holds meetings and seminars for senior personnel of educational institutions and military instructors dealing with problems in basic military training and military-patriotic education. From them the institute enriches its fund of practical experience gained in working with students, while its guests come away with recommendations concerning methods to be employed in conducting basic military training courses and a variety of activities. In a nutshell, it has resolutely launched upon a course toward achieving high quality in the theoretical, methodological and practical training of specialists.

In February 1980 the Chita State Pedagogical Institute organized an all-Union conference to discuss the experience gained by its physical education faculty and military department. Conference participants gave high ratings to the work of institute personnel in this area, while only a little later came the approval of the collegium of the USSR Ministry of Education.

The rector gives a great deal of attention to the work of the faculty and military department. Vasilii Petrovich fought in the war and then served 7 years as a senior sergeant. He experienced the bitterness of losing comrades-in-arms and loved ones. Six of his brothers died in the war. And, we might add, these were 6 of the 10 sons of one mother. After being transferred to the reserves, Tkachev graduated from the university, became a lawyer, then a party worker and for the past several years now, rector of the pedagogical institute.

I mention all this by way of underscoring the fact that everything that has to do with defending the motherland Vasilii Petrovich holds dear to his heart. He has his own deep interest in his approach to the military-patriotic education of our youth and to the training of future military instructors for the Transbaikal.

In the military department headed by Colonel A. Nichkov students learn basic knowledge and methods of conducting basic military training. This department is staffed by experienced, well qualified officers. They represent the optimum combination of combat experience and the most up-to-date levels of officer training, pedagogical mastery and technical knowledge. During the war Colonel A. Nichkov led a platoon of 76 mm guns; he has behind him his experience in the military academy, service in a troop-command position and many years of experience in an institution of higher education. Colonel M. Lokhmanov, too, served as a front-line mortar platoon leader; he now teaches tactics and basic basic training methods. In addition to these veterans there are Major B. Bogdanov, who has commanded a motorized rifle company and a company of military school students, and Major N. Grablevskiy, who recently served as commander of a motor transport company. His skill and experience make it possible to provide a high level of technical military training. So the military department here, in a word, is a strong one.

The officers' efforts here have led, first of all, to the development and continuous improvement of the material-technical base. Colonel Nichkev took me around to the lecture rooms and study centers: many of them, the tactics classroom, for example, compare in no way unfavorably with those to be found in a military school.

Faculty students come to the military department one day a week. They wear only their military uniform. Here they learn what they will need to teach future members of the armed forces the basics of military affairs and acquire the knowledge and skills required by the reserve officers training program. The rest of the time they are just ordinary students. They study Marxist-Leninist theory, pedagogy and psychology, all the things today's teacher cannot dispense with in his work.

Ordinary students.... But then, not so ordinary--upon completion of their studies at the institute they are given reserve officer rank and the right to wear the military uniform. This imposes a special responsibility even now. It occurs as no coincidence that these students have become, I would say, the pride of the institute. The rector, their instructors and friends from other departments speak highly of them.

They are, as a rule, well organized, well disciplined, well adjusted young men: all have gone through the army school--hence their discipline and self-control. Each one of them holds a minimum sports ranking, some have qualified as masters.



During their time on active duty these military instructors have rated "excellent" in their combat and political training. Personnel who have expressed the desire to study are accepted into a preparatory unit [otdeleniye]. The candidates' record in sports is taken into account here as well. Most of them, incidentally, are from the villages and small towns of the heartland; their hearts draw them to their home towns. That's where they'll go back to.

At this point the faculty has a good picture of each student--of whether the young man is capable of becoming a good basic military training and physical education instructor and of running a vigorous program of military-patriotic education. I spoke with students here, and they left a very good impression. Senior Sergeant (Reserves) Teren-Dashi Bal'zhinimayev, for example, is a Buryat from the village of Kagan-Chelutay. He is a serious person, neat and precise. He warmly recalls his basic military training in school, meetings with the renowned sniper Nomokonov and trips to visit a military unit. This was all very helpful when he began his army service. His service was outstanding: he was a gun crew commander, a gunner 2d class and secretary of his battery Komsomol organization. Sergey Kryazhev, a former gunner and holder of many decorations for military valor, is now one of the best students in the department. Also performing well in the program is Vladimir Nemerov, from the village of Baltsetuy in Shilkinskiy Rayon; in the army he was an outstanding reconnaissance man.

Many of yesterday's soldiers are communists, the rest Komsomol members. They participate actively in the work of the DOSAAF organization and in the activities of radio, parachute, rifle and driving sections. So we can be generally confident that the Chita State Pedagogical Institute will be providing the Transbaykal with good military instructors.

But this program does have its problems requiring solution. The graduate's diploma, for example, will say "instructor in basic military training and physical education." "Voyenruk" and "fizruk," as we refer to them in everyday language. But ahead of him lies a good deal of work in the area of military-patriotic education as well: organization of the Orlenok and Zarnitsa military sports games, lessons in courage, occasional leadership in the organization of DOSAAF activities, ceremonial duties, competitions, inspections etc. But so far, unfortunately, they're not giving the future military instructor any training in these areas. They aren't part of the program.

Institute graduates coming into the schools and vocational training institutions will be accomplishing in practice the tasks set forth by the 26th CPSU Congress involved in the development of a new man, the builder of communism, the stalwart defender of the motherland.

The experience gained in the training of these cadres in our pedagogical institutes deserves attention and warrants continued efforts to build upon it.

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## DOSAAF AND MILITARY COMMISSARIATS

### DOSAAF NAVAL TRAINING DESCRIBED

Moscow VOYENNYE ZNANIYA in Russian No 10, Oct 81 (signed to press 9 Sep 81) pp 22-23

[Article by P. Grishchuk, chief, Naval and Radio Training Directorate, USSR DOSAAF Central Committee: "On a Level with New Tasks"]

[Text] Navy ships and units (chast') get new replacements twice a year. Among these new recruits are many who prior to their call-up for active duty have had training in our DOSAAF naval schools. Here under the direction of instructors and experienced on-the-job-training supervisors our young men have acquired the knowledge and practical skills necessary to the performance of shipboard occupational specialties and familiarization with the basics of shipboard service.

The majority of our young charges begin their navy service successfully. Within only brief periods of time they are mastering the responsibilities with which they are entrusted, beginning to perform their watch duties independently and becoming rated specialists. We could name many graduates of our defense society's navy schools who from their first day on active duty perform their duties in an exemplary manner and set examples in both training and discipline.

It is precisely these qualities that we have seen demonstrated by Petty Officer 2d Class Nikolay Zubov, a product of the Astrakhan' navy school. Having reported for shipboard duty, he showed by his performance that in his school training he had in fact studied thoroughly his signalman-helmsman specialty.

The ship had a long ocean cruise ahead of it, and the senior specialists had been transferred to the reserves; the commander, now certain of Nikolay's good training and preparation, therefore permitted him to keep underway watch at the helm. This cruise was a serious test for Zubov, a test of his ability to discharge his operational responsibilities in a mature manner. The young seaman passed this test with honor; he did not let his school down, the school that had prepared him for a great career in the navy. Nikolay returned from the cruise with an "outstanding" rating in operational and political training and a rated specialist.

Performing successfully on examinations qualifying them to begin discharging supervisory responsibilities independently and performing their military duties in an honorable and worthy manner are graduates of other DOSAAF naval schools as well, among them the Khabarovsk, Zhdanov and Novorossiysk schools and the Novosibirsk and Kherson combined technical schools. It should be noted that defense society naval

schools are far from playing the ultimate role in training specialists for the navy. The large number of school directors, instructors and on-the-job-training supervisors are all well aware of this and apply themselves to their work with a deep sense of responsibility. The recent presentation of high state awards to a number of navy school personnel was a recognition of the importance of their labors and appreciation of their contribution to increasing the combat readiness of the Armed Forces of the USSR.

Among those receiving awards were school directors V. T. Sinev of the Kherson combined technical school and S. I. Kurzin of the Ul'yanovskaya naval school; G. N. Bakmutov, senior on-the-job-training supervisor at the Penza combined technical school and others.

I would like to tell you about one of these men in a little more detail. S. I. Kurzin, who holds the Order of the Red Banner of Labor. He heads the Ul'yanovskaya naval school, which is rightly considered one of the best of all defense society schools. Through the efforts of the director and the cohesive, well functioning staff of supervisors the school has organized an effective, well planned program of training and education. During their period of training in this school students acquire sound knowledge and sure practical skills. Perhaps, though, the most important thing that distinguishes those coming out of the Ul'yanovskaya school is their outstanding discipline and the degree to which they have been accustomed to a rigorous military regimen. This comes as a result of the fact that the entire life of the school is organized in strict accordance with the regulations, norms and rules of conduct appropriate to a military unit. From his very first day in a DOSAAF training organization a student finds himself in a situation close to the one he will encounter on board a ship or in a military unit after he finishes the school; so this accelerates the development of our soldier. He thus will more rapidly become capable of entering into the performance of his military duties to the full extent of his abilities.

The fact that a favorable microclimate has been created and carefully maintained here in the school has also contributed no little to the success of the Ul'yanovsk naval school; a spirit of good will prevails here, a desire to be of assistance to a comrade at any moment; all traces of conceit and complacency have been eliminated. All this makes it possible for the people here to work creatively, enthusiastically and effectively.

Unfortunately, though, we still have schools presenting us with conditions which cannot but give rise to alarm and concern. It is fortunate that there are not many of these schools, but there are some nonetheless. Take the Kotovskaya and Petrozavodskaya naval schools, for example, or the Orlovskaya combined technical school. The training and educational program here is not organized in accordance with guidelines. Instructional personnel show little concern for improving their knowledge of their specialties and methodological skills; they are not equipped with adequate practical skills and take a purely formalistic approach to their work. So it comes as no surprise that some of the products of these schools come to the navy with inadequate preparation; they have to be "finished" to the required level, which requires the expenditure of more time.

There is no need to demonstrate that we simply cannot put up with this kind of thing. Each defense society school should be a good-quality center for training specialists for the USSR Armed Forces. Furthermore, we must raise this training to the level of



the new tasks following from the decisions of the 26th CPSU Congress, which called for improvement in the quality of our training and vocational and moral education, the elimination of formalism in evaluating the results of the labors of both teachers and students and steps to make the practical aspects of training more relevant to real life.

Put directly, we must pose the problem of undertaking a serious reorganization of the work of our DOSAAF naval schools in the spirit of the demands of the time. We must strive to insure that each and every product of our schools has been trained to function at a real-life battle station. This means that each student in the school must acquire solid and sure practical skills in his specialty at specialist-3d-class level. So what we are talking about is a tilt in the direction of practical training. This does not mean, of course, that we can ignore our theory. It must continue to occupy the place it deserves. But I repeat, the emphasis must be on practical training. It is this that must be an object of special concern on the part of senior school officials, instructors and on-the-job-training supervisors. The on-the-job-training instructor is now the main figure in the training and education of our students. But instructors, too, must begin to give some thought to how they can inject the maximum amount of practical application into each session of instruction in theory. Training programs are now being reworked with a view to reducing theory to the required minimum and allotting most of the time to practical instruction, equipment maintenance training and activities in which students perform for the satisfaction of norm requirements.

We know that practical training is directly dependent upon a school's training materials, equipment and facilities. What kind of a material training base should a school have? A school should above all dispose of everything necessary to provide students with practical training in all areas and subjects covered in the various training programs. It should offer students the possibility of acquiring basic skills in the operation and maintenance of the equipment they are studying and then of reinforcing them in the course of subsequent practice on existing equipment. Schools must have training facilities equipped so as to permit the performance of all practical operations in accordance with instructional methods recommended by the training programs. They should also obtain from their supply agencies and then set up the equipment they are rightly authorized, write off equipment which has been in service for the required periods of time and then use parts and components of this equipment in the creation of visual training aids and the equipment of classrooms for practical training.

The authorized equipment a school obtains should be located in training areas in a rational manner; it should not be permitted to get out of working order in the course of a program of instruction through the fault of on-the-job-training supervisors and students; fuel and lubricants should be expended in an economical manner. An economy must be economical, Comrade L. I. Brezhnev stressed at the 26th CPSU Congress. We should always keep this in mind; be an intelligent manager; save the people's kopecks.

Simulators and operational training equipment should be introduced into our practical training more extensively. We should also be developing working mock-ups, display stands and other visual training aids making possible the clear illustration of instruction on theoretical topics and a direct transition from theoretical to practical instruction. At this point there opens up a vast field of activity before the rationalizers and inventors at each school. Matters rest ultimately in your hands



here, skilled comrade experts. Be bolder, create, do and make everything required to enable us to provide our future military personnel proper training in the maintenance of complex military equipment.

I would like in this connection to refer to the experience of the Kiev, Leningrad No. 1, Rechitsa, Minsk Khmel'nitskiy, Sevastopol' and Moscow No. 1 DOSAAF naval schools and the Kishinev DOSAAF combined technical school. The biggest part of the material training base in these schools has been created by the hands of skilled personnel with minimum expenditures of money and material. Best among the enthusiasts in this effort are on-the-job-training supervisors Ye. V. Skorodkin and V. I. Semenov of Moscow naval school No. 1, K. G. Dorofeyev and L. V. Pustovoytov of the Sevastopol' naval school, F. F. Luppov of Leningrad naval school No. 1 and many others. Students take pleasure in attending their classes. These instructors are able each time to find ways to inject something new into their presentations, something attracting the attention of the students. But the most important thing is the fact that they prepare their charges for confident independent performance under difficult conditions, that they see that each student develops into a good specialist. But the best testimony to the merits of these men is the letters from former students now serving in the navy.

"Thank you, comrade supervisor, for being able to make us get serious about developing our practical skills. This has been of great help to us on board ship from literally the very beginning. How pleased we were to see that we were able on our own to maintain complicated machinery, that we had the skills required to do this, skills we have acquired with your help." These lines are from a letter from Seaman V. Privolov, a graduate of the Khabarovsk naval school now serving on board one of the ships in the Pacific Fleet.

Great and important tasks now lie ahead of our DOSAAF naval schools. In training specialists for the Soviet Army and Navy they are participating directly in the process of further increasing the combat readiness of the Armed Forces of the USSR. The winds of the cold war have again begun to blow in the world. The new US administration has openly taken a course toward increasing tension and forcing an arms race. The imperialists are again trying to frighten the Soviet Union by building up their military strength. "You don't scare us. We have strong nerves, and we have been well tempered," Comrade L. I. Brezhnev declared in his speech in Kiev on 9 May this year. "We don't support the arms race; we oppose it.... But if they force us, then to any provocation on the part of militant imperialism we will find a quick and effective response."

These words of the General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet and Chairman of the Council of Defense contain a reminder of the need to maintain the country's defenses at the necessary levels. This must always be kept in mind by those who have been entrusted with the task of training navy specialists in our DOSAAF schools.

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## MILITARY SCHOOLS AND ACADEMIES

### TANKMAN TRAINING AT CHELYABINSK TANK COMMAND SCHOOL

Moscow VOYENNNYYE ZNANIYA in Russian No 9, Sep 81 (signed to press 10 Aug 81) pp 1-1

[Article by Junior Sergeant I. Kozlov: "Tankman--A Working Occupation, Letter to Military School Entrants"]

[Text] I'll tell you right off we're going to be talking about the simulator.

...The tank set up a howl and started its climb up the steep slope. For a few seconds the only thing visible through the periscopes was the blue sky. Then, finding its normal center of gravity, the machine flopped down heavily onto its full tracks. The thing threw me around, but I got right back down on the eyepiece.

The battlefield now opened out ahead of us. Not far beyond the empty trenches a house was burning. Now moving at high speed, the tank tossed from side to side. Suddenly a column of earth shot up under my very nose and I almost ended up in a fresh shell hole. A sharp turn--and then another explosion right in front. Another turn--and I'm heading straight for the obstacles. I jerk sharply at the controls--I'll have to be steadier and gentler.... There, it looks like I've made it! And then the light goes out....

I pulled off my helmet and climbed out. My hands ached; my face was wet with perspiration. Yes, that's the kind of simulators we have here at the Chelyabinsk Higher Tank Command School imeni 50th Anniversary of the Great October. It's an excellent, modern training facility. I went over to the instrument display: the electronic system had recorded six deviations from the course by a degree and a half. I could have run it better. But that's all right; I'm still learning, and I'm only in my second course. And all the opportunities are here. Simulators have been developed so we can work on improving our tank driving skills during the periods allotted us for independent study without having to leave the confines of the school. Similar simulators are available for fire training and for working on communications equipment. In a nutshell, we go into the field--and we do this frequently--with an already fairly solid set of skills.

I'm a tanker. And now when I meet a soldier or officer on the street whom I don't know but who is wearing the same insignia on his collar tabs that I do, I feel a pleasant sense of having something in common with him, a sensation I've never had before. I like to see beside me a man who is reliable, decisive and strong--and these are the kind of people we have in our branch of the service. And I've got to be like that, too--and not only I, but perhaps you, comrades, too, who are reading these lines.

So I'll try to describe the way somebody gets into our school. The path starts back in the rayon military commissariat. It's better, of course, for a young civilian to enter

the school by way of the military commissariat. Knowledgeable officers from the different branches of the service will talk with you here and tell you about the occupational specialty; he may also be able to get you to examine yourself some. Do you really have a firm desire to work--and I mean work!--in the army? That's the most important thing.

But if you've already picked out the only school that suits you and decided to apply there directly--then welcome aboard. But first make the effort to find out as much as you can about both the school and your future occupation--otherwise the student shoulder boards may turn out not to fit you all that well. You're taking an important step, so be serious. And get serious now while you're still only preparing to enter the school.

Some of you still think it's easier to get into a military school than into some institute, that it's just a matter of showing up as a healthy physical specimen. This just isn't true, and to dispel the illusion I'll point out to you that we admit to the competitive examinations only those completing their secondary school work with a grade average of at least 4. Devote yourself above all to the exact sciences: you'll have to take both written and oral examinations in mathematics and an oral examination in physics. But I don't agree with those who would accept a 3 on the composition. Remember our army's tradition: the officer is a cultured and well-rounded individual.

Conditions for acceptance into a military school also include the provision that candidates will be examined on their physical training in accordance with GTO [Prepared for Labor and Defense] program standards. Unfortunately, not everybody gives this the attention it deserves--those people end up staying on that side of the checkpoint. We have a saying: armor can't take flabby muscles. But even if you're preparing to enter a school in which you won't have to drag track links around or move shells, you're still not going to get anywhere without good physical training.

Now let's assume you've passed all these tests. You've still got one more to go: you'd better get thoroughly acquainted with what's in your personal records, and if your military instructor has noted that you've failed to earn an "outstanding" rating in basic training, or the secretary of the Komsomol committee points out your passivity, then the scales may tip in favor of another applicant.

And then, of course, you'll be bringing with you the knowledge you've acquired from your membership in DOSAAF training organizations. Many of my comrades-in-arms have completed the defense society's motor vehicle or radio schools. They know their equipment inside and out; they're not the kind you send out to find the clearance in the tank or shake the interference off the antenna.

...So we're finally enrolled. We've all experienced that upsurge of relief, enthusiasm and animation: we've now left all the obstacles behind and we want to get to the tanks as fast as we can. We got this opportunity very early on; we began our work with these fighting machines from practically the very first day.

The tank. I think it would be impossible not to love this huge steel thing. It has become for us a symbol of the power of our motherland, a concentration of the boldest and most complex engineering solutions, each of its lines the carefully designed product of keen minds, each detail, each part lovingly worked and applied by skilled working hands. It has been entrusted to us, and its power is henceforth in our hands; our might will be one with the machine.



Our school commandant, Major General of Tank Troops L. P. Kozhevnikov, puts it this way: "The occupation of tankman is a working occupation. It would pay to take a look at the weathered hands and faces of our students; then you'd realize that tankmen are made in the field and in the parks. The platoon, company, battalion or regimental commander always remains a member of his crew. The seat behind the armor remains the tanker's workplace; his fingers are not allowed to forget the controls. Our work is like the work of the steelworkers and miners for whom the Chelyabinsk area is famous. We take over fighting and working traditions from them."

Acquaintance with our instructors was another pleasant discovery for me. They are tactful, correct, congenial and simply very interesting people. The most important thing, though, is something else--the principle of instruction they use here itself. They don't teach you here like they do in school: here are two examples, children, but don't you dare copy them! No, in the school lecture room you become the instructor's junior partner, so to speak; he initiates you into the secrets of his work. And the assignments he gives you are personalized for you so as to take into account the capabilities of each student. We are far from having gotten to know all of them, of course. But when you consider the fact that as early as our first course we were already coming to know instructors such as Colonel Yakushev, the senior instructor in the fire training department, Major Yur'yev, a teacher in the same department, Major Zubenya, who teaches us tactics, and Lieutenant Colonel Traspov from the department of instruction in Marxism-Leninism, then just think how many truly captivatingly interesting people still await us.

With their help we will become skilled engineers in the operation of both armored and motor-transport vehicles (this occupational specialty will be recorded on our standard all-Union certificates) and master the laws of tactics and the art of destroying a target with the first shot.

Our school is one of the newest. Its museum doesn't have any exhibits all covered with old dust. Its traditions are already being established, though. They are traditions not only of excellent instruction and outstanding knowledge of military equipment. Graduates I. Shchapin, V. Trushkin and O. Kirpichenok have recently been presented with high state awards for exemplary performance in command assignments. We are taking them as examples.

Be an officer. Today that means to be an outstanding specialist and a true man of learning. It means to make yourself the master of the minutes and seconds, to be able to accomplish in one hour what another person wouldn't be able to get done in three. It means always to be in excellent physical condition, to take no notice of loads that bring others to their knees. Most importantly, though, it means to be ready to stand in defense of the motherland and to render her the service she requires.

People say a student is "all buttoned up." They say the words "there isn't enough time" fall from his lips of themselves. All this is true. But we don't have enough time because we use it all. We have sports sections to suit any taste, dozens of independent groups--from vocal and instrumental groups to spoon ensembles--and one of the best libraries in town. We are loaded to the limit. And we don't get tired.

But if we are tired after long field exercises.... You know, one student entering our school gave this answer to the question of why he had decided to become an officer:



'The motherland is generous. She feeds us all and shelters us. The only thing she can't do is defend herself. And everybody who eats the motherland's bread and drinks her water has the obligation to act as her reliable defender.'

And that's why we're here.

That's why we're studying one of the basic, one of the difficult army occupations. For ourselves we consider it the most important.

So come join us at the Chelyabinsk tank school. We'll be friends.

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